

**What is claimed is:**

1. A method of modifying cytosolic T<sub>3</sub>-binding protein (CTBP) gene expression comprising contacting the cytosolic T<sub>3</sub>-binding protein gene with an effective amount of follicle stimulating hormone (FSH).
2. The method of claim 1 wherein the expression of CTBP is down regulated.
3. A method for modifying preantral stage and/or early antral stage follicular development in a mammal comprising exposing the follicles of the mammal to an effective amount of a compound that activates the adenylyl cyclase/cAMP signal pathway.
4. The method of claim 3 wherein the compound is FSH or forskolin.
5. The method of claim 3 wherein follicular development is suppressed.
6. A method of modifying CTBP gene expression in granulosa cells comprising contacting the granulosa cells with an effective amount FSH.
7. A method of enhancing aromatase activity in granulosa cells comprising contacting the granulosa cells with an amount of FSH effective to suppress CTBP gene expression.
8. A method of modifying estrogen production in a mammal comprising administering to the mammal an effective amount of follicle stimulating hormone.
9. A method of modifying ovulation in a mammal comprising administering to the mammal an effective amount of follicle stimulating hormone.
10. An isolated nucleic acid molecule having the nucleotide sequence of SEQ ID NO. 12 or having a nucleotide sequence that hybridizes under high stringency conditions to the complement of SEQ ID NO. 12 and comprises a regulatory region that is modulated by FSH.
11. The isolated nucleic acid molecule of claim 10 wherein the nucleic acid molecule is up-regulated in the presence of FSH.
12. An isolated polypeptide of SEQ ID NO. 13.
13. A method of modifying the expression of the polypeptide of SEQ ID NO. 13 comprising exposing the gene encoding the polypeptide to an effective amount of FSH.